

TABLE I. DEVICE

PARAMETERS 1/

JPL PART # ST12192-	MFG.	GENERIC PART #	PACKAGE STYLE	DETAIL SCREENING TESTS	ELECTRICAL CHARACTERISTICS & GROUP A TESTS	RADIATION (TID) LEVEL RAD(Si)
D5822ATR	SSD	SPD5822A/46	T0-46 2/	Table III	Table IV	100k 3/

NOTES:

- 1/** This drawing, in conjunction with CS515581, imposes all requirements for procurement of these devices.
- 2/** Device physical dimensions shall conform to MIL-S-19500, Appendix F, Figure 9, outline number T-2A with the following exceptions:
- a.** Height Dimension (symbol A) shall be .065" min to .085" max.
- b.** Lead designation shall be: Lead number 1 - anode
Lead number 2 - anode
Lead number 3 - cathode
- 3/** Sufficient radiation tolerance to this TID level is guaranteed by design for this device. [See CS515581, Paragraph 4.7.7].
- 4.** This standard takes precedence over documents referenced herein.

TABLE II. MANUFACTURERS MAXIMUM RATINGS

PARAMETER	RATING	UNITS
V_r	40	Vdc
I_o	3	A
$I_{FM}(REP)$	20	A
$I_{FM}(SUSDC)$	200	A
$R_{\theta J-C}$	15	°C/W
T_j, T_{STG}	-55 TO 150	°C

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VENDOR PART NO.	VENDOR			JPL PART NO.	
<div> <div> JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY </div> </div>					
Procurement specification: CS515581 Screening specification: ZPP-2073-GEN	TITLE: <div> DIODE, SILICON RECTIFIER POWER SCHOTTKY, 3A, 40V </div>				JPL CAGE NO.:23835 ST 12192
Custodian: Electronic Parts Reliability Section 514					SHEET 1 OF 2

TABLE III. DETAIL SCREENING REQUIREMENTS

SCREEN (SEE MIL-S-19500, TABLE II)	TEST CONDITIONS/REQUIREMENTS
3. TEMPERATURE CYCLE	AS SPECIFIED.
9. INTERIM ELECTRICAL PARAMETERS	V_{r1} , I_{h1} (TEST CONDITIONS AND LIMITS OF TABLE IV)
10. HIGH TEMPERATURE REVERSE BIAS (HTRB)	MIL-STD-750, METHOD 1038, CONDITION A.
11. INTERIM ELECTRICAL AND DELTA PARAMETERS	SAME PARAMETERS AS STEP 9 ABOVE DELTA LIMITS: $V_{r1} = \pm 25 \text{ mV}$ $I_{h1} = \pm 100 \text{ uA}$ OR $\pm 20\%$, WHICHEVER IS GREATER
12. POWER BURN-IN	MIL-STD-750, METHOD 1038, CONDITION B RECTIFYING TEST, 240 HOURS AT $T_A = 25^\circ\text{C}$ I_F = MAXIMUM RATED PER TABLE II. V_R = 80% OF MAXIMUM RATED PER TABLE II. f = 60 Hz
13. FINAL ELECTRICAL TESTS	
A. PARAMETERS	SUBGROUPS 2 AND 3 OF TABLE IV BELOW
B. DELTA LIMITS	SAME PARAMETERS AND LIMITS AS 11 ABOVE

TABLE IV. GROUP A ELECTRICAL TESTS

TEST	MIL-STD-750 METHOD	TEST CONDITIONS	LIMITS		
			MIN	MAX	UNITS
SUBGROUP 2 $T_A = 25^\circ\text{C}$					
BREAKDOWN VOLTAGE, B_V	4021	$I_h = 10 \text{ uA}$	40		Vdc
REVERSE LEAKAGE, I_{r1}	4016	$V_R = 40 \text{ Vdc}$		100	uA
FORWARD VOLTAGE, V_{r1}	4011	$I_F = 1.0 \text{ Adc}$ 1/		0.60	Vdc
FORWARD VOLTAGE, V_{r2}	4011	$I_F = 3.0 \text{ Adc}$ 1/		0.80	Vdc
SUBGROUP 3					
REVERSE LEAKAGE, I_{r2}	4016	$V_R = 40 \text{ Vdc}$, $T_A = 100^\circ\text{C}$		1	mA
SUBGROUPS 4 THROUGH 7 2/					

NOTES:

1/ PULSE TEST: Pulse width $\leq 300 \text{ usec}$; Duty Cycle $\leq 2\%$.

2/ These tests not applicable unless specified.

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SHEET 2 OF 2			SHEET OF	

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